

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings of claims in the application.

**Listing of Claims:**

Claim 1 - 5 (Cancelled)

Claim 6 (Currently Amended): An electronic commercial transaction supporting system, comprising:

a shop, connected to a network, configured to present ~~which presents~~ merchandise to customers via the network; and

a business information management system connected to the network,

wherein said shop includes:

a correspondence generating unit ~~which specifies~~ configured to specify correspondence relations between attributes that are objects of interest for a plurality of respective subjects in an electronic commercial transaction at an actual stage of the transaction, based on an equivalence relation which satisfies a reflexive law, a symmetric law and a transitive law, the correspondence generating unit ~~extracting~~ also configured to extract, by a cellular decomposition operation, one or more of the specified correspondence relations as a common subspace satisfying a necessary condition for concluding the electronic commercial transaction by decomposing a set of attributes into nonempty disjoint equivalence classes according to the equivalence relation;

a table ~~which records~~ configured to record the extracted correspondence relations;

and

a correspondence presenting unit ~~which presents~~ configured to present to the subjects in the transactions in a manner such that the common subspace satisfying a necessary condition for concluding the electronic commercial transaction is attached to cellular spaces corresponding to the subjects in the transactions by a cell attaching operation,

wherein, under the equivalence relation, the correspondence generating unit is configured to specify specifies a correspondence relation between search keywords which the customer gave at the time of search for a desired merchandise, and information, utilized by the customer, among information on the merchandise presented by said shop as a result of search, and is configured to inspect a history of transactions to determine whether the specified correspondence is a new correspondence relation, in which case if ~~the specified correspondence is found to be a new correspondence relation, that does not exist before, by inspecting history of the transactions,~~ then the search keywords are corresponded to the information utilized by the customer among information on the merchandise, as a new attribute and recorded in the table,

wherein the correspondence presenting unit ~~reads out and presents~~ is configured to read out and present the correspondence relations stored in the table at a stage of another transaction, and

wherein said business information management system includes a functional block ~~which transversely refers~~ configured to refer transversely to ~~[[said]]~~ respective tables of ~~[[that]]~~ a plurality of ~~[[said]]~~ shops ~~[[have]]~~.

Claim 7 (Currently Amended): A system according to Claim 6, wherein said business information management system further includes a second functional block ~~which detects~~ desired one from the correspondence relations configured to detect a desired correspondence relation from said correspondence relations recorded in the table of any of said plurality of shops.

Claim 8 (Currently Amended): A system according to Claim 7, wherein said business information management system further includes a third functional block ~~which presents~~ configured to present the detected desired correspondence relation at [[to]] an actual stage of an electronic commercial transaction at another shop.

Claim 9 (Currently Amended): A system according to Claim 6, wherein ~~[[in]]~~ said shop further includes ~~there is provided~~ a local business information management block ~~which manages~~ configured to manage the table.

Claim 10 (Currently Amended): A system according to Claim 7, wherein ~~[[in]]~~ said shop further includes ~~there is provided~~ a local business information management block ~~which manages~~ configured to manage the table.

Claim 11 (Currently Amended): A system according to Claim 8, wherein ~~[[in]]~~ said shop further includes ~~there is provided~~ a local business information management block ~~which manages~~ configured to manage the table.

Claim 12 (Currently Amended): A system according to Claim 9, wherein said local information management block includes a maintaining functional block ~~which inspects~~ configured to inspect accumulating correspondence relations and to suitably modify ~~modifies~~ the correspondence relations.

Claim 13 (Currently Amended): A system according to Claim 10, wherein said local information management block includes a maintaining functional block ~~which inspects~~ configured to inspect accumulating correspondence relations and to suitably modify ~~modifies~~ the correspondence relations.

Claim 14 (Currently Amended): A system according to Claim 11, wherein said local information management block includes a maintaining functional block ~~which inspects~~ configured to inspect accumulating correspondence relations and to suitably modify ~~modifies~~ the correspondence relations.

Claim 15 (Currently Amended): A system according to Claim 12, wherein said maintaining functional block ~~detects~~ is configured to detect mutually-contradicting correspondence relations ~~[[ones]]~~ among the accumulated correspondence relations and ~~keeps one side thereof that is more appropriate like while other side thereof is deleted~~ to keep the more appropriate correspondence relation while deleting the other correspondence relation from the table.

Claim 16 (Currently Amended): A system according to Claim 13, wherein said maintaining functional block ~~detects~~ is configured to detect mutually-contradicting correspondence relations ~~[[ones]]~~ among the accumulated correspondence relations and ~~keeps one side thereof that is more appropriate like while other side thereof is deleted~~ to keep the more appropriate correspondence relation while deleting the other correspondence relation from the table.

Claim 17 (Currently Amended): A system according to Claim 14, wherein said maintaining functional block ~~detects~~ is configured to detect mutually-contradicting correspondence relations ~~[[ones]]~~ among the accumulated correspondence relations and ~~keeps one side thereof that is more appropriate like while other side thereof is deleted~~ to keep the more appropriate correspondence relation while deleting the other correspondence relation from the table.

Claim 18-20 (Cancelled)

Claim 21 (New): A computer medium comprising instructions which, when executed by a computer, cause the computer to:

specify correspondence relations between attributes that are objects of interest for a plurality of respective subjects in an electronic commercial transaction at an actual stage of the transaction, based on an equivalence relation which satisfies a reflexive

law, a symmetric law and a transitive law, wherein the specifying comprises, specifying a correspondence relation between search keywords which a customer gave at the time of search for a desired merchandise, and information, utilized by the customer, among information on the merchandise presented by a shop as a result of search, and also comprises inspecting a history of transactions to determine whether the specified correspondence is a new correspondence relation, in which case the search keywords are corresponded to the information utilized by the customer among information on the merchandise, as a new attribute and recording the newly extracted correspondence relation in a table;

extract, by a cellular decomposition operation, one or more of the specified correspondence relations as a common subspace satisfying a necessary condition for concluding the electronic commercial transaction by decomposing a set of attributes into nonempty disjoint equivalence classes according to the equivalence relation;

reading out and presenting the correspondence relations stored in the table at a stage of another transaction; and

present results of the extraction to the subjects of another transaction in a manner such that the common subspace satisfying a necessary condition for concluding the electronic commercial transaction is attached by a cell attaching operation to cellular spaces corresponding to the subjects in the transactions.

Claim 22. (New): An electronic commercial transaction supporting method comprising:

receiving an initial set of attributes for a product;

receiving a customer query via a network, said query comprising a customer set of attributes;

presenting products to a customer based on said initial set of attributes and said customer set of attributes;

specifying correspondence relations between attributes from said customer set and said initial set based on an equivalence relation which satisfies a reflexive law, a symmetric law and a transitive law;

determining if any attributes of said customer set of attributes is a new attribute and recording said new attribute to form a revised set of attributes;

extracting, by a cellular decomposition operation, one or more of the specified correspondence relations as a common subspace satisfying a necessary condition for concluding the electronic commercial transaction by decomposing the revised set of attributes into nonempty disjoint equivalent classes according to the equivalence relation; and  
repetitively:

receiving a subsequent customer query comprising a subsequent customer set of attributes;

presenting the subsequent customer with products based on said one or more of the specified correspondence relations by attaching said common subspace by a cell attaching operation to a cellular space corresponding to said customer query;

specifying correspondence relations between attributes from said subsequent customer set and said revised set based on an equivalence relation which satisfies a

reflexive law, a symmetric law and a transitive law;

determining if any attributes of said subsequent customer set of attributes is a new attribute and recording said new attribute to form a product set of attributes; and

extracting, by a cellular decomposition operation, one or more of the specified correspondence relations as a common subspace satisfying a necessary condition for concluding the electronic commercial transaction by decomposing the product set of attributes into nonempty disjoint equivalent classes according to the equivalence relation.